CLAIMS:

1. A method of treating or preventing diabetes by administering to a human or animal an effective dosage of an extract of a plant of the genus *Trichocaulon* or of the genus *Hoodia.*

2. A method according to claim 1 wherein said plant of the genus *Trichocaulon* is selected from the group consisting of *Trichocaulon piliferum* and *Trichocaulon officinale* and said plant of the genus *Hoodia* is selected from the group consisting of *Hoodia currorii, Hoodia gordonii* and *Hoodia lugardii.*

3. A method according to claim 1 wherein the extract is obtainable by a process comprising the steps of treating collected plant material with a solvent to extract a fraction having anti-diabetic activity, separating the extraction solution from the rest of the plant material, removing said solvent from said extraction solution and recovering said extract.

4. A method according to claim 3 wherein the process further comprises the step of concentrating the active agent in the extracted material by further extraction with a solvent.

5. A method according to claim 3, wherein said solvent of said solvent extraction step or steps is one or more of methylene chloride, water, methanol, hexane, ethyl acetate or mixtures thereof.

6. A method according to claim 3 wherein the process further comprises the step of concentrating the active agent in the extracted material by chromatographic separation.

7. A method according to claim 6 wherein said chromatographic separation employs one or more of chloroform, methanol, ethyl acetate, hexane or

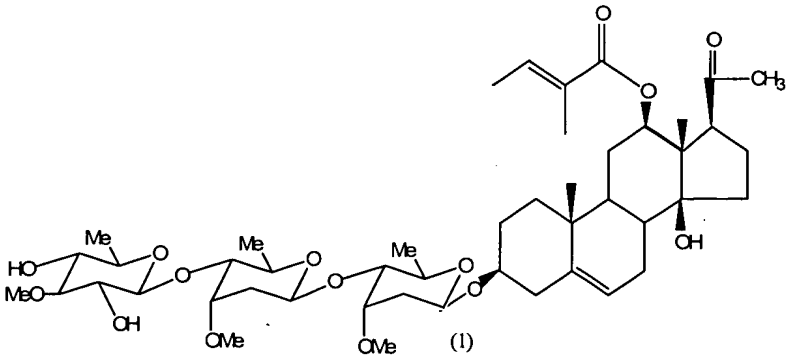
mixtures thereof as an eluant.

8. A method according to claim 6 wherein the process includes carrying out the chromatographic separation on a column, collecting the eluate in fractions from the column, evaluating the fractions to determine their anti-diabetic activity, and selecting at least one fraction containing the anti-diabetic agent.

9. A method according to claim 1 wherein said extract is obtainable by a process comprising the steps of pressing collected plant material to separate sap from solid plant material and recovering the sap free of the solid plant material to form the extract.

10. A method according to claim 1 wherein said extract is processed to form a free-flowing powder.

11. A method according to claim 1 wherein said extract comprises the compound of general formula (1):



(1)

and/or its pro-drugs.

12. A method according to claim 1 wherein said extract is administered in a foodstuff or beverage to have an anti-diabetic effect when ingested.

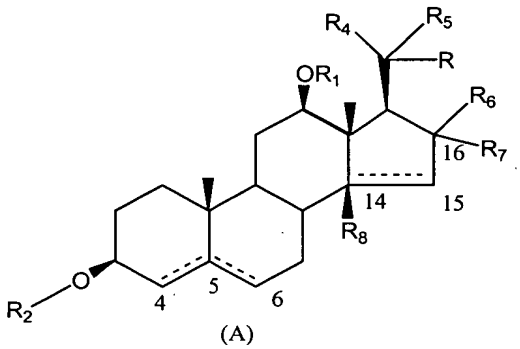
13. An extract as referred to in claim 1 for use as a medicament having anti-diabetic

activity.

14. A composition having anti-diabetic activity comprising an effective quantity of an extract as claimed in claim 1.

15. A foodstuff or beverage comprising an effective quantity of an extract as referred to in claim 1 to have an anti-diabetic effect when ingested.

16. A method for treating or preventing diabetes comprising the step of administering to a human or animal an effective dosage of at least one compound chosen from the compounds of general formula (A):



(A)

wherein:

R = alkyl;

R_1 = H, alkyl, tigloyl, anthraniloyl, or any other organic ester group;

R_2 = H, or one or more 6-deoxy carbohydrates, or one or more 2,6-dideoxy carbohydrates, or glucose molecules, or combinations thereof;

R_3 = H, alkyl, aryl, acyl, or glucoxy,

R_4, R_5 = either R_4, R_5 form together with the Carbon atom which they are attached to a carbonyl group (-C=O), or R_4 = H and R_5 = H, OH;

R_6, R_7 = either R_6, R_7 form together with the Carbon atom C-16 which they are attached to a carbonyl group (-C=O),or R_6 = H and R_7 = -OR_3;

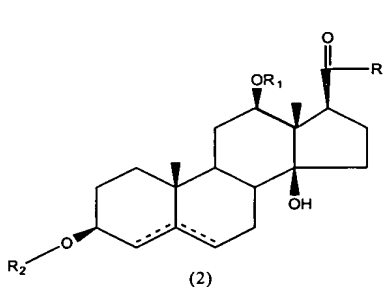
R_8 = H, OH;

and the broken lines indicate the optional presence of a further bond between C4-C5 or

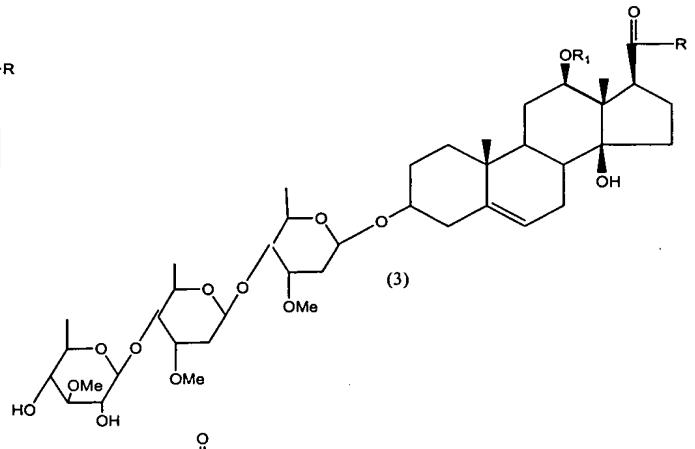
C5-C6, and/or C14-C15;

and their pharmaceutically acceptable salts and pro-drugs.

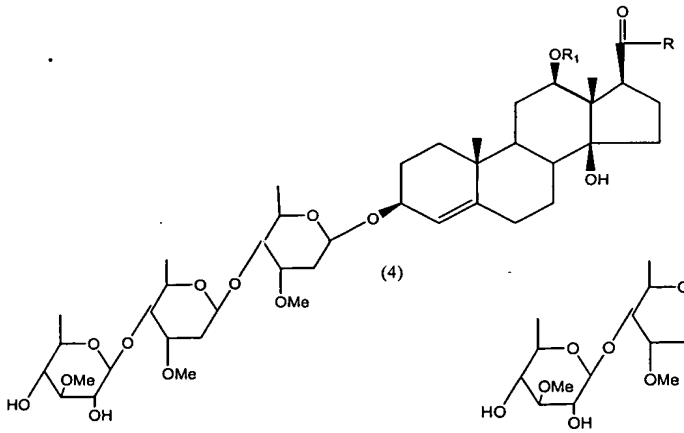
17. A method according to claim 16, wherein the compounds of general formula (A) are chosen from the general formula (2), (3), (4), (5), (6),(7), (8), (9), (10), (11), (12), (13), (14):



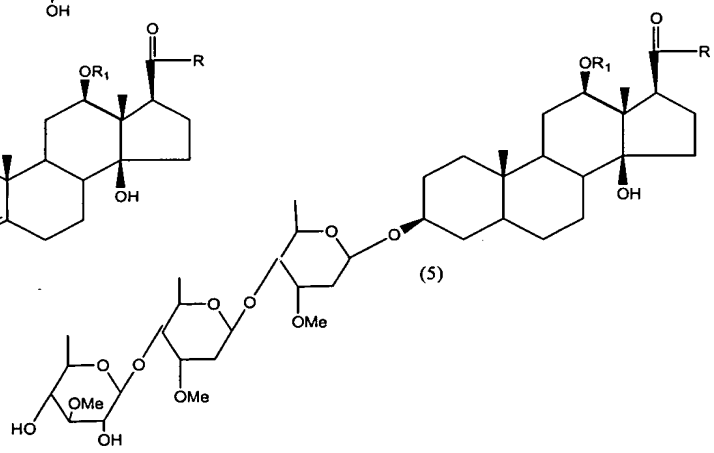
(2)



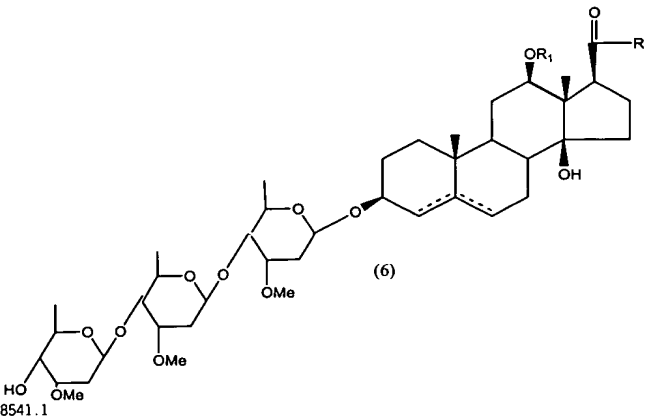
(3)



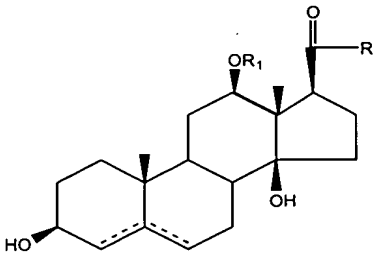
(4)



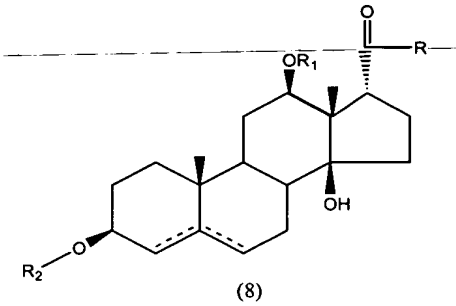
(5)



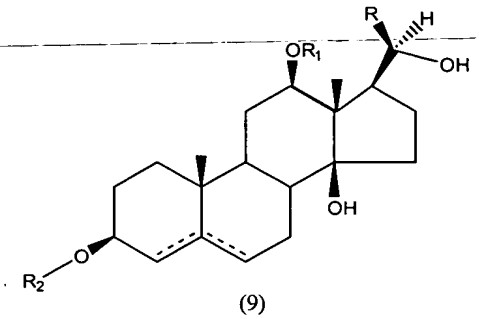
(6)



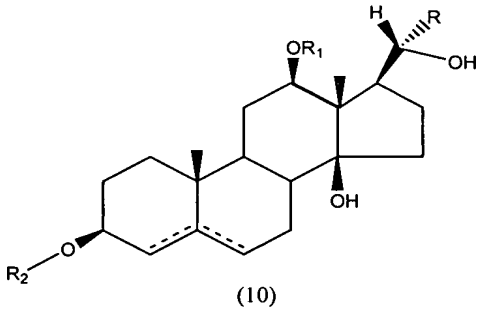
(7)



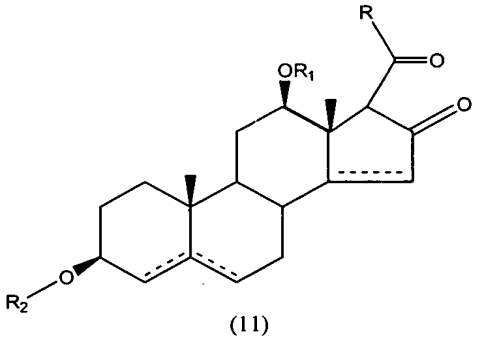
(8)



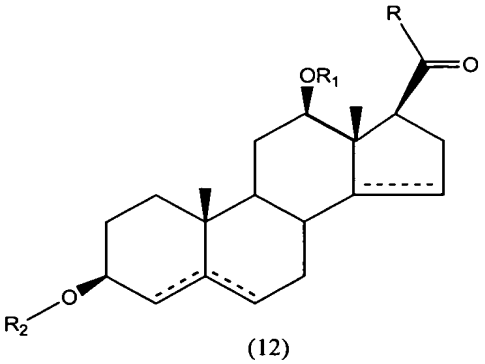
(9)



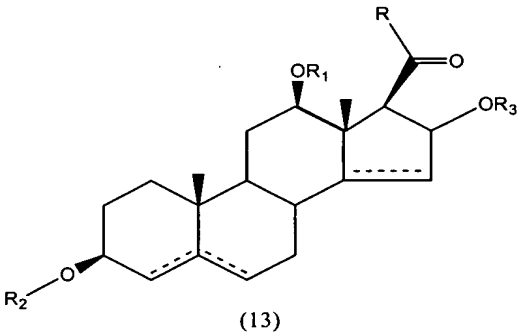
(10)



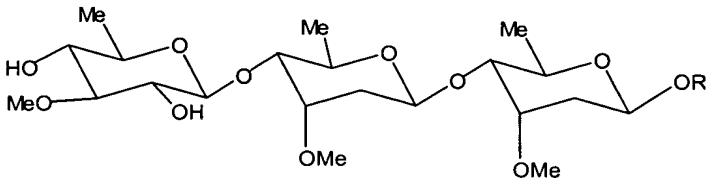
(11)



(12)



(13)



(14)

wherein in the general formula (2), (3), (4), (5), (6),(7), (8), (9), (10), (11), (12), (13):

R = alkyl;

R_1 = H, alkyl, tigloyl, anthraniloyl, or any other organic ester group;

R_2 = H, or one or more 6-deoxy carbohydrates, or one or more 2,6-dideoxy carbohydrates, or glucose molecules, or combinations thereof;

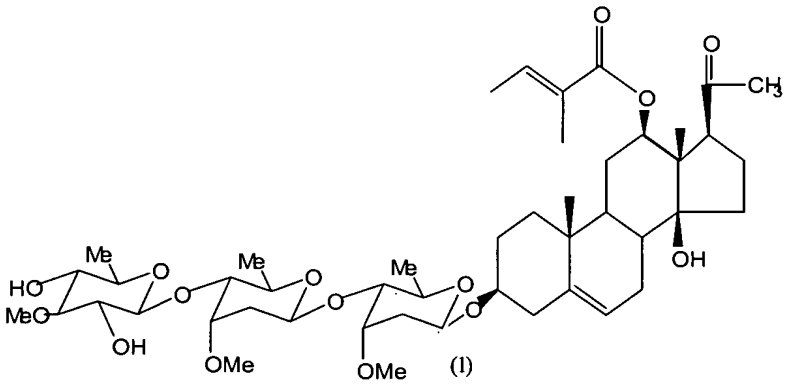
and the broken lines indicate the optional presence of a further bond between C4-C5 or C5-C6, and/or C14-C15;

R_3 = H, alkyl, aryl, acyl, or glucoxy;

and in the general formula (14):

R = H, alkyl, aryl or any steroid possessing a C14 beta hydroxy group, or a C12 beta hydroxy functionality, or a C17 acyl group, or a C5-C6 olefin, or combinations thereof.

18. A method of claim 16 wherein said compound is a compound of general formula (1):



(I)

19. A compound as referred to in claim 16 for use as a medicament having anti-diabetic activity.

20. A composition having anti-diabetic activity comprising one or more of the compounds as referred to in claim 16.

21. A method according to claim 16 wherein said compound is administered in a foodstuff or beverage to have an anti-diabetic effect when ingested.

22. A foodstuff or beverage comprising an effective quantity of one or more of the compounds as referred to in claim 16 to have an anti-diabetic effect when ingested.

23. A composition according to claim 14 or claim 20 when admixed with a pharmaceutical excipient, diluent or carrier.

24. A composition according to claim 23 which is prepared in unit dosage form.

25. A method for treating or preventing diabetes comprising the step of administering to a human or animal an effective dosage of a composition according to claims 14 or 20.

26. A method of decreasing blood glucose level comprising the step of administering to a human or animal an effective dosage of an extract of a plant of the genus *Trichocaulon* or of the genus *Hoodia* or at least one compound of formula (A), (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13) or (14).

27. A method of preventing diabetes comprising the step of administering to a human or animal an effective dosage of an extract of a plant of the genus *Trichocaulon* or of the genus *Hoodia* or at least one compound of formula (A), (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13) or (14).

28. A method of treating impaired glucose tolerance comprising the step of administering to a human or animal an effective dosage of an extract of a plant of the genus *Trichocaulon* or of the genus *Hoodia* or at least one compound of formula (A), (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13) or (14).

29. The method according to any of claims 1, 16, 26, 27 or 28 wherein said compound, or said composition, is administered in a dosage amount of from 0.05 mg/kg/day to 100 mg/kg/day.

30. The method according to claim 31 wherein the dosage amount is 0.1 mg/kg/day to 50 mg/kg/day.

31. A pharmaceutical composition comprising an effective amount of :
i) an extract of a plant of the genus *Trichocaulon* or of the genus *Hoodia* or at least one compound of formula (A), (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13) or (14) ;
in association with
ii) one or more other agents chosen from: representative agents to treat diabetes, glycogen phosphorylase inhibitors, sorbitol dehydrogenase inhibitors, glucosidase inhibitors and aldose reductase inhibitors.

32. A method of treating or preventing diabetes comprising the step of administering to a human or animal an effective dosage of
i) an extract of a plant of the genus *Trichocaulon* or of the genus *Hoodia* or at least one compound of formula (A), (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13) or (14)
in association with
ii) one or more other agents chosen from: representative agents to treat diabetes, glycogen phosphorylase inhibitors, sorbitol dehydrogenase inhibitors, glucosidase inhibitors and aldose reductase inhibitors.

33. Kits or single packages comprising
i) an extract of a plant of the genus *Trichocaulon* or of the genus *Hoodia* or at least one compound of formula (A), (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13) or (14), and
ii) one or more other agents chosen from: representative agents to treat diabetes,

glycogen phosphorylase inhibitors, sorbitol dehydrogenase inhibitors, glucosidase inhibitors and aldose reductase inhibitors.

34. The method of claim 32, wherein the ingredients i) and ii) are simultaneously, separately, or sequentially administered.